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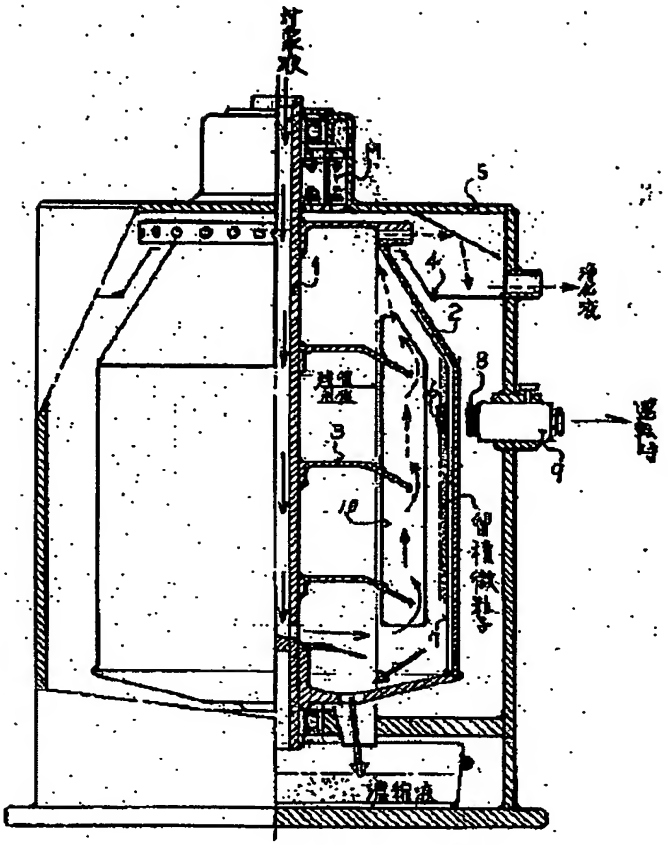
TITLE : HIGH-PERFORMANCE CENTRIFUGAL SEPARATOR FOR FINE PARTICLE HAVING SYNCHRONIZED ROTATION MECHANISM AND MAGNETIC DISCHARGE MECHANISM IN SEPARATION TANK



ABSTRACT : PROBLEM TO BE SOLVED: To enhance performance on the whole by improving both a separating function of a high-performance centrifugal separator for solid-liquid separation of mixed liquid of fine particles as an object and a discharging function of the fine particles settled in a separation tank.

SOLUTION: The high-performance centrifugal separator for fine particles is constituted of a synchronous rotation mechanism, in which synchronous rotation plates 10 are provided in forced precipitation plates 3 of the inside of a separation tank in order to synchronize separation object liquid in the separation tank 2 supplied from a hollow rotary shaft 1 with the same tank till the same rotation. Further, the centrifugal separator for fine particles is constituted of a magnetic discharge mechanism, in which separated settled fine particles in the separation tank are settled on a rectangular vibration thin plate 7 holding a vibrating magnet 6 in the convex position of the inner wall of the separation tank. A magnetic discharge device 9 holding a fixed magnet 8 homopolarly opposed to the vibrating magnet is equipped. When the fixed magnet of the same device is retreated during operation and approached to the separation tank at time of stopping operation, the vibrating magnet is repulsed and the vibration thin plate is vibrated and the settled fine particles are discarded to the outside of the separation tank as a condensate together with residual liquid.